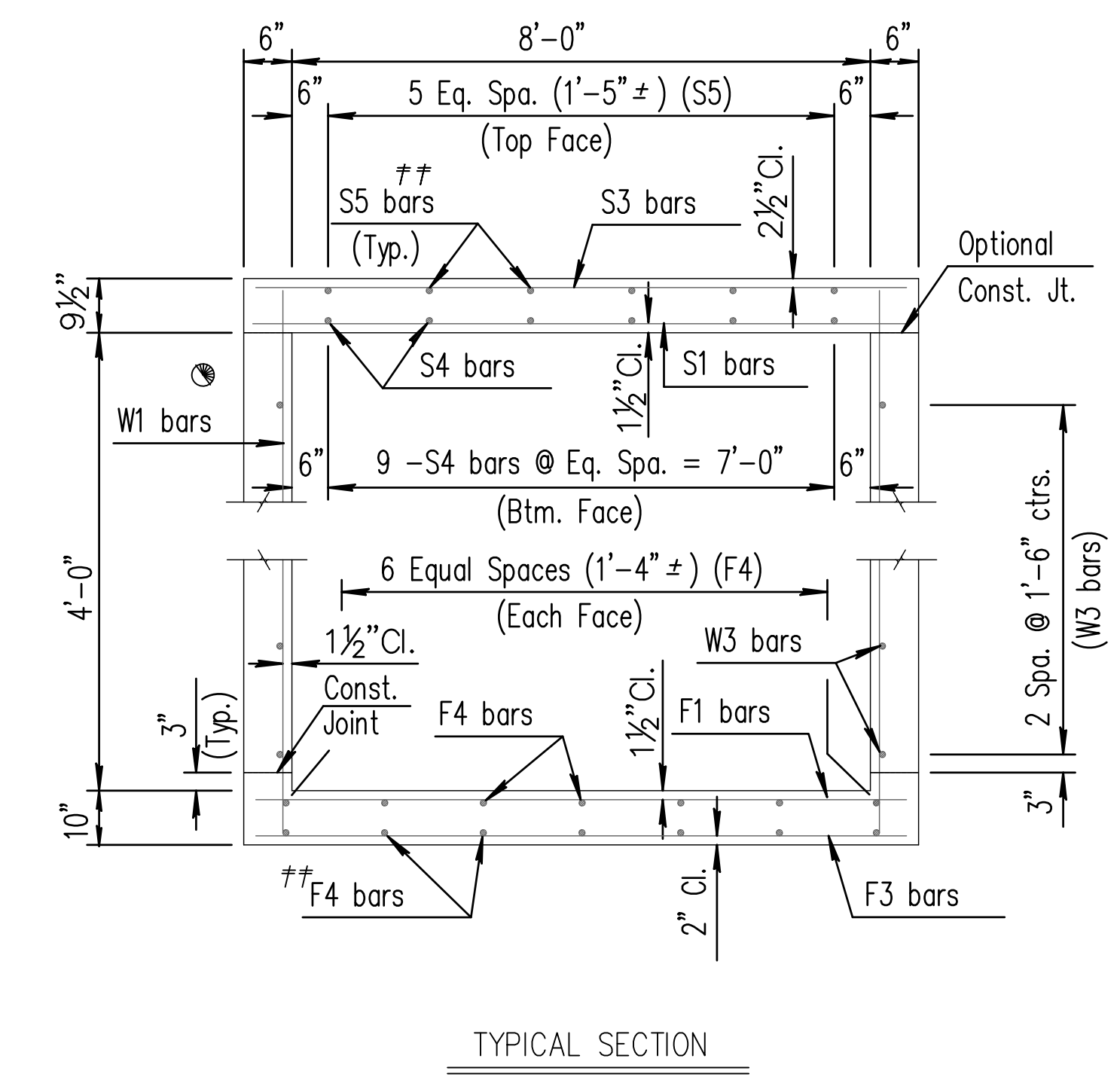
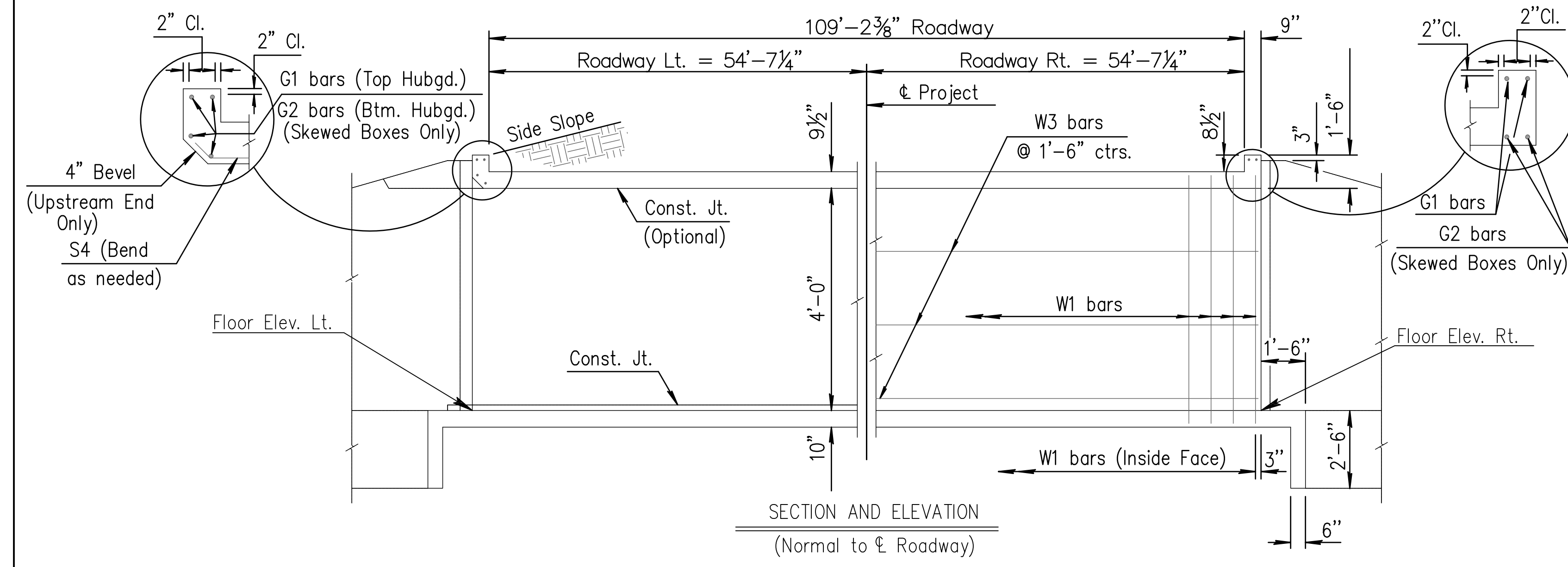


STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	87 N-0514-01	2010	80	148



See RCB Auxiliary Details for Optional Splice.

Note:  
S3 bars omitted unless grade box or slab thickness is greater than or equal to 12".

Note:  
F3 bars omitted unless floor thickness is greater than or equal to 12".

\*\* Omit S5 bars when S3 bars are omitted and omit the bottom layer of F4 bars when F3 bars are omitted.

**GENERAL NOTES**

**LOADING:** HS20-44 AASHTO Specifications, 1983 Edition.

**UNIT STRESSES:** Grade 4.0 Concrete;  $f'c = 4,000$  p.s.i.  
Reinforcing Steel;  $f_y = 60,000$  p.s.i.

**FILL HEIGHT:** Unless otherwise noted, the Design Fill Height is measured from the riding surface at the culvert and shall include the surfacing.

**CONCRETE:** Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a 3/4 inch triangular moulding. Where Grade 4.0 Concrete (AE) is specified, it shall be placed in the top slab above the Construction Joint.

**REINFORCING:** All reinforcing shall conform to ASTM A615, Grade 60. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted.

**EXCAVATION:** Excavation for culverts less than bridge length shall not be paid for directly but shall be subsidiary to Grade 4.0 Concrete. Excavation for RCB Bridges shall be paid for as Class III Excavation.

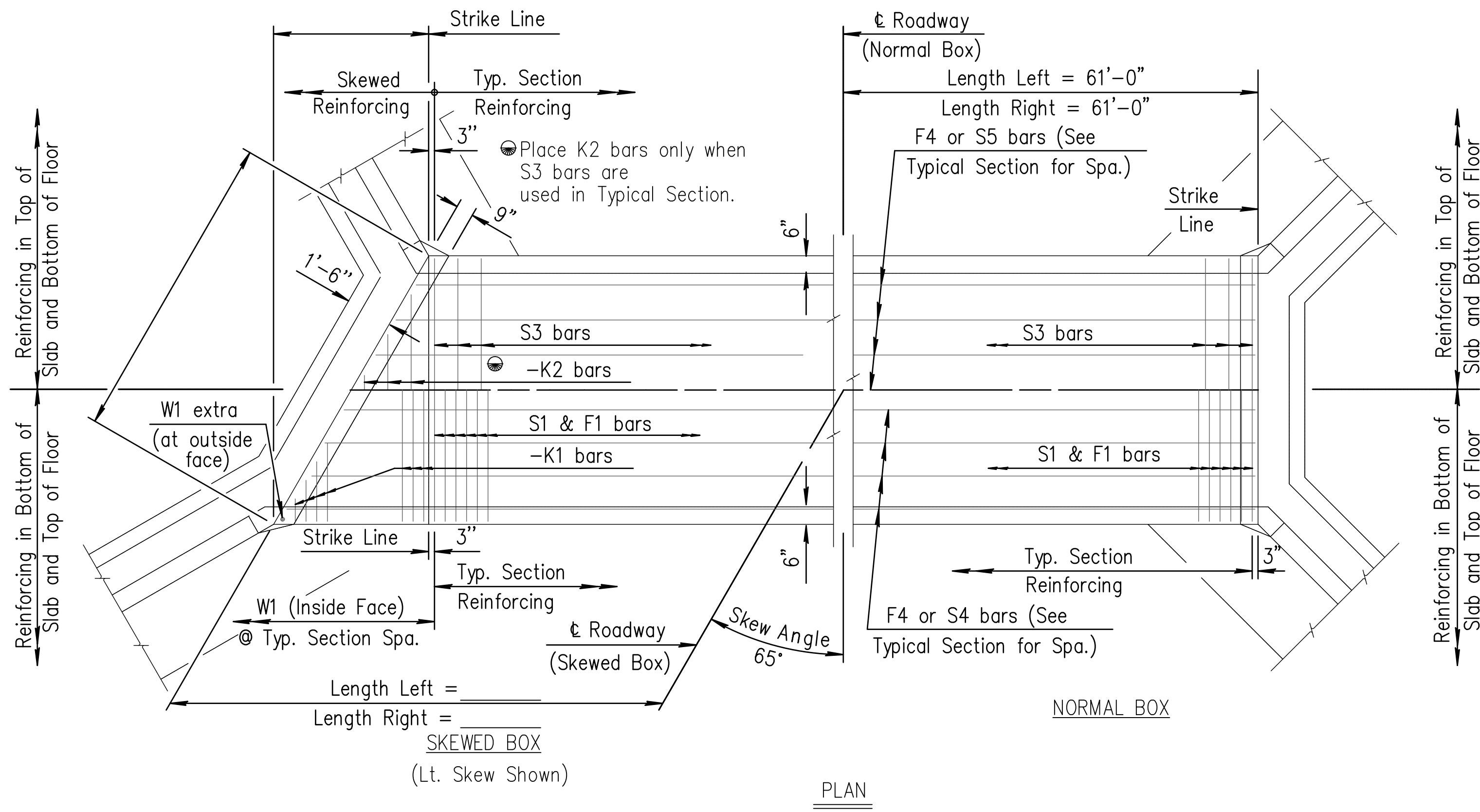
**SEAL COURSE:** A Seal Course may be required by the Engineer. The Seal Course shall be unreinforced Concrete (Commercial Grade) to a minimum depth of 3 inches or as determined by the Engineer. Concrete for the seal course shall be paid for at the unit price set for Concrete for Seal Course.

**FOUNDATION STABILIZATION:** The Foundation Stabilization quantity has been calculated to the limits shown on the "RCB Auxiliary Details" sheet. The depth may be increased by the Engineer. The Contractor may under-run Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

**QUANTITIES:** The quantities shown in the Culvert Summary include apron and/or soil saver quantities when their construction is required by the plans. Payment for additional quantities that result from including seal course and/or floating apron, as a change in original plans, shall be made at the Unit Price bid for the various items involved.

**GRANULAR BACKFILL (WINGWALLS):** Special backfill procedures may be required at the direction of the Engineer. See Auxiliary Details Sheet.

**STRIKE LINE:** Wingwalls and that portion of the RCB outside the Strike Line shall be constructed level. Footing for wingwalls shall be constructed with the culvert floor. See wingwall detail sheet.



For design purposes ONLY. Do NOT use for Construction

CULVERT SUMMARY											includes any apron welded wire fabric					
Floor Elev. Lt.	Floor Elev. Rt.	Crown Gr. Elev.	Design Fill Ht.	Skew	Left Wings		Right Wings		Scour Apron	Soil Saver	Concrete			Reinf. Steel (Gr. 60)		
					Barrel (Cu.Yds.)	Wings (Cu.Yds.)	Total (Cu.Yds.)	Barrel (Lbs.)			Wings (Lbs.)	Total (Lbs.)				
1313.00	1315.00	1322.93	0	0	FLARED	FLARED	NO	NO	84.50	9.50	93.99	11366	739	12105		

BAR SCHEDULE																																					
F1				F3				F4				S1				S3				S4				S5													
Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length										
6	5?"	266	8'-8"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	28	31'-5"	6	5?"	266	8'-8"	N/A	N/A	N/A	N/A	4	1'-6"	82	8'-8"	5	27	41'-8"	4	24	31'-5"					
K1				K2				W1				W3				G1				G2																	
Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length						
N/A	N/A	N/A		N/A	N/A	N/A		4	9"	326	5'-4"	N/A	N/A	N/A	N/A	4	24	31'-5"	N/A	N/A	N/A	N/A	5	4	8'-8"	N/A	N/A	N/A	N/A								

Minimum Splice Lengths	
#4	1'-4"
#5	1'-8"
#6	2'-0"

SUMMARY OF QUANTITIES	
Concrete (Grade 4.0)	94.0 C.Y.
Concrete (Grade 4.0)(AE)	0.0 C.Y.
Reinforcing Steel (Gr. 60)	12100 Lbs.
Reinforcing Steel (Gr. 60)(Epoxy Coated)	0 Lbs.
Class III Excavation	C.Y.
Foundation Stabilization	33 C.Y.
Concrete for Seal Course (Set)	1 C.Y.
Granular Backfill (Wingwalls) (Set)	1 C.Y.

NO.	DATE	REVISIONS	BY	APP'D
KANSAS DEPARTMENT OF TRANSPORTATION				
Sta. 51+90.20				
SINGLE 8 ft x 4 ft RCB (65° ROT. LT.)				
BR 1.8.4 P			Sedgwick Co.	
DESIGNED	DATE	6-5-91	APP'D	KENNETH F. HURST
DESIGN CK.	DETAIL CK.		QUANTITIES	TRACED
			QUAN. CK.	TRACE CK.